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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,748	02/07/2005	Giulio Alberti	26332	8351
20529	7590	02/06/2008		
NATH & ASSOCIATES 112 South West Street Alexandria, VA 22314			EXAMINER BERNSHTEYN, MICHAEL	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 02/06/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/508,748

Applicant(s)

ALBERTI ET AL.

Examiner

MICHAEL M. BERNSHTEYN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-18 and 20-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-18 and 20-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action follows a response filed on November 13, 2007. Claims 1-9, 11-18 and 20-33 have been amended; claims 10 and 19 have been cancelled; no claims have been added.
2. In view of the amendment(s) and remarks, the objection of claims 2-6, 9, 11-14, 16-24, 27-29 and 31 and the rejection of claims 8, 10, 14, 17, 18, 25 and 27-33 under 35 U.S.C. 112, 2nd paragraph have been withdrawn.
3. Claims 1-9, 11-18 and 20-33 are pending.

Claim Rejections - 35 USC § 112, 2nd paragraph

4. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
5. Claims 1-9, 11-18 and 20-33 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 4-5, recites, "can be obtained". This rationale is applicable to composition which "can be obtained" by a stated process because any variation in any parameter within the scope of the claimed process would change the organic solution produced. One who made or used an organic solution made by a process other than the process cited in the claim would have to produce an organic solution using all possible parameters within the scope of the claim, and then extensively analyze each product to

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determine if this the organic solution was obtainable by a process within the scope of the claimed process.

Claims 9, 11, 17, and 25 recite, "may also contain. This phrase renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 12-14, line 1, recite, "The proton conducting composite membranes of claim 11" cause indefiniteness because claim 11 is drawn to "a method" and not to "proton conducting composite membranes".

Claim 16, lines 1-2, the recitation "the composite membrane of claim 15" causes indefiniteness because claim 15 is drawn to "a method" instead of "composite membrane".

Claim 26, lines 1-2, the recitation "the method of claim 21" causes indefiniteness because claim 21 is drawn to "nano-polymers" instead of "a method".

Claim 27, line 1, recites "A method for an easy insertion". The term "easy" is a relative term which renders the claim indefinite. The term "easy" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

6. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.

7. Claims 1-33 are rejected under 35 U.S.C. 102(a) as being anticipated by Bauer et al. (WO 03/077340 or U.S. Patent 7,108,935), for the rationale recited in paragraph 6 of Office Action dated on June 13, 2007.

8. Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by Alberti et al. (U. S. Patent 5,892,080), for the rationale recited in paragraph 7 of Office Action dated on June 13, 2007.

9. Claims 1-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Grot et al. (U.S. Patent 5,919,583), for the rationale recited in paragraph 8 of Office Action dated on June 13, 2007.

Response to Arguments

10. Applicant's arguments filed on November 13, 2007 have been fully considered but they are not persuasive.

11. In response to Applicants arguments that Bauer et al. teach a colloidal dispersion, rather than the solution as instantly claimed and this dispersion contains particle of the pre-formed zirconium phosphate sulfoarylenephosphonate (page 25, 1st paragraph), it is note that Bauer discloses that the composite membrane materials are preferably prepared starting from a solution of a polymer of the state of art (abstract).

12. Regarding Applicants arguments that Alberti et al. teach mesoporous solids obtained by reaction between a solution containing a mixture of di- phosphonic and phosphorous acids and a solution containing the tetravalent metal M(IV) and hydrofluoric acid. Alberti et al. do not teach a solution according to the instant subject matter (page 26), it is noted that claims 1-8 ,12-14, 16, 21-24 and 29-33 are drawn to a

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product-by-process claims, and therefore it is the examiner position to believe that the products of the above mentioned references are substantially the same as the sheet for light guiding plate comprising a polymer and a particulate diffusing agent recited in claim 1, even though obtained by a different process, consult *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Since the USPTO does not have proper equipment to do the analytical test, the burden is now shifted to the applicant to prove otherwise. "[E]ven though product-by-process claims are limited by and defined by the process; determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

13. As to Applicants arguments that the organic solution of Alberti et al., i.e., dioxane, does not contain tetravalent metal, and therefore it cannot be considered a precursor solution (page 16, 2nd paragraph), it is noted that Alberti clearly discloses a solid mesoporous crystalline composition of diphosphonate-phosphite of a **tetravalent metal**, with a limited distribution of mesopores having the formula (abstract):

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wherein: M is a tetravalent metal, R is a bivalent organic radical, x varies from 0.3 to 0.6, y varies from 0.05 to 0.3. The process for its production is described, together with its uses and a solid catalyst containing $-SO_3H$ acid groups, active in the conversion processes of hydrocarbons, which can be obtained from said mesoporous crystalline composition by treatment with a sulfonicphosphonic or arylphosphonic acid, followed, only in the case of treatment with arylphosphonic acid, by sulfonation with a sulfonating agent.

In particular, in the above formula, M is a **tetravalent metal**, which can be conveniently selected from **zirconium**, **titanium** and tin, and is preferably zirconium owing to the greater stability to hydrolysis of the composition (col. 2, lines 54-61).

14. Regarding Applicants arguments that Grot et al. clearly do not teach a membrane containing the inorganic filler that is not preformed (page 28, the last paragraph), it is noted that Grot discloses that zirconium hydrogen phosphate $Zn(HPO_4)_2$ can be precipitated in a membrane of perfluorinated sulfonic acid polymer (preferably in acid form) by soaking the membrane in an aqueous solution of containing zirconium ions, e.g., 1-5M zirconyl chloride, for a time and at a temperature sufficient to penetrate the membrane solution (col. 7, lines 8-15, example 1, col. 10, line 64 through col. 11, line 42). The cation exchange groups are preferably selected from the group consisting of sulfonate, carboxylate, phosphonate, imide, sulfonamide and sulfonamide groups (col. 3, lines 29-35).

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

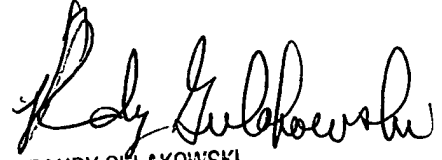
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael M. Bernshteyn
Patent Examiner
Art Unit 1796

MB
02/01/2008



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